US-PAT-NO: 5901252

DOCUMENT-IDENTIFIER: US 5901252 A

See image for Certificate of Correction

TITLE: Process and apparatus for

extracting and recognizing

figure elements using

division into receptive fields,

polar transformation,

application of one-dimensional

filter, and correlation

between plurality of images

DATE-ISSUED: May 4, 1999

US-CL-CURRENT: 382/276, 345/648 , 348/442 ,

382/293

JΡ

APPL-NO: 08/ 470061

DATE FILED: June 6, 1995

PARENT-CASE:

This application is a division of application

Ser. No. 07/987,954, filed Dec. 11, 1992, now pending.

FOREIGN-APPL-PRIORITY-DATA:

April

COUNTRY APPL-NO

APPL-DATE

JP 3-327722 December

11, 1991

JP 3-327723 December

11, 1991

4-103137

05/28/2003, EAST Version: 1.03.0002

22, 1992 JP 4-133744 1992 JP 4-249956 September 18, 1992

May 26,

----- KWIC -----

Detailed Description Text - DETX (159):

Further, when the one-dimensional filter is constituted by a skeleton filter the characteristic of which can be represented by the Dirac's .delta.-function, an edge can be extracted by a simple and fast calculation process.

The "inverse polar transformation" extracting
the sinusoidal excitation
pattern is expressed as ##EQU25## In the above
equation, .delta.() denotes a
delta function, and .tau..sub.X and .tau..sub.Y
denote velocity parameters in
the X- and Y-axis directions. Since the delta
function .delta.() is equal to
one at the point of zero, and zero at the other
points, the above equation is
deformed to ##EQU26## which makes clear the content
of the inverse polar
transformation. This calculation is carried out in
the embodiment.

Detailed Description Text - DETX (760):

The "inverse polar transformation" extracting the sinusoidal excitation pattern is expressed as ##EQU27## where .delta.().

denotes a <u>delta function</u>, and .sigma..sub.Y denote parameters in the X and Y-axis directions. Since the <u>delta function</u> .delta.() is equal to one at the point of zero, and zero at the other points, the above equation is deformed to ##EQU28## This calculation is carried out in the embodiment.

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